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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/733,666 | Applicant(s) NAFTALI, AMIR | |
| | Examiner OSCAR A. LOUIE | Art Unit 2436 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-29,31-43 and 45-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-29,31-43 and 45-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/20/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This non-final action is in response to the Request for Continued Examination filing of 10/20/2008. Claims 1, 4-29, 31-43, & 45-56 are pending and have been considered as follows.

Examiner Note

In light of the applicant's amendments the examiner hereby withdraws his previous Specification Objection, withdraws his previous 35 U.S.C. 112 first paragraph rejections with respect to Claims 1-29, 31-43, & 45-56, and withdraws his previous 35 U.S.C. 101 rejections with respect to Claims 29, 43, & 56. It is also noted that it has come to the examiner's attention that the previous Office Action appeared to have unintentionally omitted Claims Objections with respect to several informalities, which are included and clarified below herein.

Claim Objections

1. Claims 1, 13, 20, 29, 31, 38, 43, 45, 51, & 56 are objected to because of the following informalities:

- Claim 1 line 1 recites the term "for" which should be "...of..." as the current language suggests intended use;
- Claim 13 line 1 recites the term "for" which should be "...of..." as the current language suggests intended use;

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- Claim 20 lines 1, 4, & 8 recite the term “for” which should be “...configured to...” as the current language suggests intended use;
- Claim 29 lines 2, 5, & 9 recite the term “for” which should be “...configured to...” as the current language suggests intended use;
- Claim 31 line 1 recites the term “for” which should be “...of...” as the current language suggests intended use;
- Claim 38 lines 1 & 6 recite the term “for” which should be “...configured to...” as the current language suggests intended use;
- Claim 43 lines 2, 6, 7, & 9 recite the term “for” which should be “...configured to...” as the current language suggests intended use;
- Claim 45 line 1 recites the term “for” which should be “...of...” as the current language suggests intended use;
- Claim 51 lines 1 & 6 recite the term “for” which should be “...configured to...” as the current language suggests intended use;
- Claim 56 lines 2, 6, 8, 11, 14, & 16 recite the term “for” which should be “...configured to...” as the current language suggests intended use;

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 31, 33, 43, 45, 50, & 56 are rejected under 35 U.S.C. 102(b) as being anticipated by L. Blunk & J. Vollbrecht (RFC 2284).

Claim 31:

L. Blunk & J. Vollbrecht disclose a method for initiating an authentication session in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication with a second processor over a network, the method executing in the first processor comprising,

- “sending a request to establish a transmission session” (i.e. “The Request packet is sent by the authenticator to the peer. Each Request has a type field which serves to indicate what is being requested”) [page 5];
- “receiving an authentication session request during the connection establishment process” (i.e. “The peer MUST send a Response packet in reply to a Request packet”) [page 6];
- “conducting authentication session communications during the connection establishment process” (i.e. “The Request packet is sent by the authenticator to the peer”) [page 5].

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Claim 33:

L. Blunk & J. Vollbrecht disclose a method for initiating an authentication session in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication with a second processor over a network, the method executing in the first processor, as in Claim 31 above, further comprising,

- “the step of receiving an authentication session request includes a substep of receiving the authentication session request in a first portion of transmission control protocol data” (i.e. “Responses MUST only be sent in reply to a received Request and never retransmitted on a timer. The Identifier field of the Response MUST match that of the Request”) [page 5].

Claim 43:

L. Blunk & J. Vollbrecht disclose a computer-readable storage medium including instructions for initiating an authentication session in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication with a second processor over a network, the instructions executed by the first processor comprising,

- “one or more instructions for sending a request to establish a transmission session” (i.e. “The Request packet is sent by the authenticator to the peer. Each Request has a type field which serves to indicate what is being requested”) [page 5];
- “one or more instructions for receiving an authentication session request during the connection establishment process” (i.e. “The peer MUST send a Response packet in reply to a Request packet”) [page 6];

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- “one or more instructions for conducting authentication session communications during the connection establishment process” (i.e. “The Request packet is sent by the authenticator to the peer”) [page 5].

Claim 45:

L. Blunk & J. Vollbrecht disclose a method for initiating an authentication session in a connection establishment process of a transmission control protocol between first and second processors communicating via a network comprising,

- “requesting, with the first processor, to establish a transmission session” (i.e. “The Request packet is sent by the authenticator to the peer. Each Request has a type field which serves to indicate what is being requested”) [page 5];
- “creating, with the second processor, an authentication session request in a first portion of transmission control protocol data” (i.e. “The Request packet is sent by the authenticator to the peer. Each Request has a type field which serves to indicate what is being requested”) [page 5];
- “the authentication session request indicates a request to start an authentication session” (i.e. “The authenticator MUST transmit an EAP packet with the Code field set to 1 (Request)”) [page 5];
- “sending the first portion of transmission control protocol data from the second processor to the first processor” (i.e. “The Request packet is sent by the authenticator to the peer. Each Request has a type field which serves to indicate what is being requested”) [page 5];

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- “receiving an authentication session request during the connection establishment process” (i.e. “Responses MUST only be sent in reply to a received Request and never retransmitted on a timer. The Identifier field of the Response MUST match that of the Request”) [page 5];
- “conducting authentication session communications during the connection establishment process” (i.e. “The Request packet is sent by the authenticator to the peer”) [page 5].

Claim 50:

L. Blunk & J. Vollbrecht disclose a method for initiating an authentication session in a connection establishment process of a transmission control protocol between first and second processors communicating via a network, as in Claim 45 above, further comprising,

- “a first value is set in the first portion of transmission control protocol data for data sent from the second processor to the first processor” (i.e. “The Request packet is sent by the authenticator to the peer”) [page 5];
- “a second value is set in the first portion of transmission control protocol data for data from the first processor to the second processor” (i.e. “The peer MUST send a Response packet in reply to a Request packet”) [page 6].

Claim 56:

L. Blunk & J. Vollbrecht disclose a computer-readable storage medium including instructions for initiating an authentication session in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication with a second processor over a network, the instructions executed by the first processor comprising,

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- “one or more instructions for requesting, with the first processor, to establish a transmission session” (i.e. “The Request packet is sent by the authenticator to the peer. Each Request has a type field which serves to indicate what is being requested”) [page 5];
- “one or more instructions for creating, with the second processor, an authentication session item in a first portion of transmission control protocol data” (i.e. “The Request packet is sent by the authenticator to the peer. Each Request has a type field which serves to indicate what is being requested”) [page 5];
- “the authentication session item is used to start an authentication session” (i.e. “The authenticator MUST transmit an EAP packet with the Code field set to 1 (Request)”) [page 5];
- “one or more instructions for sending the first portion of transmission control protocol data from the second processor to the first processor, during the connection establishment process” (i.e. “The Request packet is sent by the authenticator to the peer”) [page 5];
- “one or more instructions for receiving the first portion of transmission control protocol data at the first processor” (i.e. “The peer MUST send a Response packet in reply to a Request packet”) [page 5];
- “one or more instructions for conducting authentication session communications” (i.e. “The Request packet is sent by the authenticator to the peer”) [page 5].

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Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 4-9, 11-29, 32, 34-42, 46-49, & 51-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over L. Blunk & J. Vollbrecht (RFC 2284) in view of Mullen et al. (US-2002/0147909-A1).

Claim 1:

L. Blunk & J. Vollbrecht disclose a method for providing authentication in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication over a network, the method executing in a second processor comprising,

- “creating an authentication session request in a standard response to the request to establish the TCP connection” (i.e. “The Request packet is sent by the authenticator to the peer. Each Request has a type field which serves to indicate what is being requested”) [page 5];
- “sending the standard response to the first processor during the connection establishment process” (i.e. “Responses MUST only be sent in reply to a received Request”) [page 5];

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- “wherein the first processor enters an authentication session as a result of receiving- the authentication session request” (i.e. “Success and Failure...Success packet is sent by the authenticator to the peer to acknowledge successful authentication...Code field set to 3 (Success)...If the authenticator cannot authenticate the peer...Code field set to 4 (Failure)”) [page 5];

but, they do not explicitly disclose,

- “receiving a request to establish a Transmission Control Protocol (TCP) connection from the first processor,” although Mullen et al. do suggest that PPP is used on TCP, as recited below;

however, Mullen et al. do disclose,

- “PPP is a widely used data link protocol for transmitting Transfer Control Protocol/Internet Protocol (TCP/IP) packets over dial-up telephone connections” [page 1 paragraph 0002];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant’s invention to include, “receiving a request to establish a Transmission Control Protocol (TCP) connection from the first processor,” in the invention as disclosed by L. Blunk & J. Vollbrecht since it is reasonable to expect that if PPP is used on TCP, then any newer derivation of PPP such as PPP with EAP would also utilize TCP for the purposes of providing authentication in TCP.

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Claim 4:

L. Blunk & J. Vollbrecht and Mullen et al. disclose a method for providing authentication in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication over a network, the method executing in a second processor, as in Claim 3 above, further comprising,

- “the standard response includes a segment used in a three-way handshake” (i.e. “Additional Request packets MUST be sent until a valid Response packet is received, or an optional retry counter expires. Retransmitted Requests MUST be sent with the same Identifier value in order to distinguish them from new Requests”) [page 9].

Claim 5:

L. Blunk & J. Vollbrecht and Mullen et al. disclose a method for providing authentication in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication over a network, the method executing in a second processor, as in Claim 2 above, further comprising,

- “the standard response includes a value in a TCP segment header” (i.e. “The authenticator MUST transmit an EAP packet with the Code field set to 1 (Request)”) [page 5].

Claim 6:

L. Blunk & J. Vollbrecht and Mullen et al. disclose a method for providing authentication in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication over a network, the method executing in a second processor, as in Claim 5 above, further comprising,

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- “a first value is set for data from the second processor to the first processor” (i.e. “The Request packet is sent by the authenticator to the peer”) [page 5];
- “a second value is set for data from the first processor to the second processor” (i.e. “The peer MUST send a Response packet in reply to a Request packet”) [page 6].

Claim 7:

L. Blunk & J. Vollbrecht and Mullen et al. disclose a method for providing authentication in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication over a network, the method executing in a second processor, as in Claim 2 above, further comprising,

- “the standard response includes a TCP option” (i.e. “Type - The Type field is one octet. This field indicates the Type of Request or Response”) [page 6].

Claim 8:

L. Blunk & J. Vollbrecht and Mullen et al. disclose a method for providing authentication in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication over a network, the method executing in a second processor, as in Claim 7 above, further comprising,

- “the standard response includes an octet” (i.e. “The Type field is one octet”) [page 6].

Claim 9:

L. Blunk & J. Vollbrecht disclose a method for providing authentication in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication over a network, the method executing in a second processor, as in Claim 1 above, further comprising,

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- “the authentication session includes an Extensible Authentication Protocol (EAP) session” (i.e. “The PPP Extensible Authentication Protocol (EAP) is a general protocol for PPP authentication which supports multiple authentication mechanisms”) [page 3].

Claim 11:

L. Blunk & J. Vollbrecht disclose a method for providing authentication in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication over a network, the method executing in a second processor, as in Claim 1 above, further comprising,

- “the first processor includes a client process” (i.e. “peer - The other end of the point-to-point link; the end which is being authenticated by the authenticator”) [page 3].

Claim 12:

L. Blunk & J. Vollbrecht disclose a method for providing authentication in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication over a network, the method executing in a second processor, as in Claim 1 above, further comprising,

- “the second processor includes a server process” (i.e. “authenticator - The end of the link requiring the authentication. The authenticator specifies the authentication protocol to be used in the Configure-Request during Link Establishment phase”) [page 2].

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Claim 13:

L. Blunk & J. Vollbrecht disclose a method for initiating an authentication session between first and second processes comprising,

- “including an authentication session request within a standard response to a TCP session request to establish a TCP connection” (i.e. “The Request packet is sent by the authenticator to the peer. Each Request has a type field which serves to indicate what is being requested”) [page 5];
- “wherein the authentication session request is used to start an authentication session” (i.e. “Success and Failure...Success packet is sent by the authenticator to the peer to acknowledge successful authentication...Code field set to 3 (Success)...If the authenticator cannot authenticate the peer...Code field set to 4 (Failure)”) [page 5];
- “sending the standard response including the authentication session request during connection establishment” (i.e. “Responses MUST only be sent in reply to a received Request”) [page 5];

but, they do not explicitly disclose,

- “TCP,” although Mullen et al. do suggest that PPP is used on TCP, as recited below;

however, Mullen et al. do disclose,

- “PPP is a widely used data link protocol for transmitting Transfer Control Protocol/Internet Protocol (TCP/IP) packets over dial-up telephone connections” [page 1 paragraph 0002];

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Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "TCP," in the invention as disclosed by L. Blunk & J. Vollbrecht since it is reasonable to expect that if PPP is used on TCP, then any newer derivation of PPP such as PPP with EAP would also utilize TCP for the purposes of providing authentication in TCP.

Claim 14:

L. Blunk & J. Vollbrecht disclose a method for initiating an authentication session between first and second processes, as in Claim 13 above, further comprising,

- "the step of including includes a substep of including an authentication session request in a transfer of data indicating a TCP session handshake" (i.e. "Additional Request packets MUST be sent until a valid Response packet is received, or an optional retry counter expires. Retransmitted Requests MUST be sent with the same Identifier value in order to distinguish them from new Requests") [page 5].

Claim 15:

L. Blunk & J. Vollbrecht disclose a method for initiating an authentication session between first and second processes, as in Claim 14 above, further comprising,

- "the authentication session request includes a value in a TCP segment header" (i.e. "The authenticator MUST transmit an EAP packet with the Code field set to 1 (Request)") [page 5].

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Claim 16:

L. Blunk & J. Vollbrecht disclose a method for initiating an authentication session between first and second processes, as in Claim 15 above, further comprising,

- “a first value is set for data from the second process to the first process” (i.e. “The Request packet is sent by the authenticator to the peer”) [page 5];
- “a second value is set for data from the first process to the second process” (i.e. “The peer MUST send a Response packet in reply to a Request packet”) [page 6].

Claim 17:

L. Blunk & J. Vollbrecht disclose a method for initiating an authentication session between first and second processes, as in Claim 14 above, further comprising,

- “the authentication session request includes a TCP option” (i.e. “Type - The Type field is one octet. This field indicates the Type of Request or Response”) [page 6].

Claim 18:

L. Blunk & J. Vollbrecht disclose a method for initiating an authentication session between first and second processes, as in Claim 17 above, further comprising,

- “the TCP option includes an octet” (i.e. “The Type field is one octet”) [page 6].

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Claim 19:

L. Blunk & J. Vollbrecht disclose a method for initiating an authentication session between first and second processes, as in Claim 13 above, further comprising,

- “an authentication session entered as a result of using the authentication session request includes an Extensible Authentication Protocol (EAP) session” (i.e. “The PPP Extensible Authentication Protocol (EAP) is a general protocol for PPP authentication which supports multiple authentication mechanisms”) [page 3].

Claim 20:

L. Blunk & J. Vollbrecht disclose an apparatus for providing authentication in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication over a network comprising,

- “an authentication session requestor for creating an authentication session request in a standard response to a TCP session request to establish a TCP connection” (i.e. “The Request packet is sent by the authenticator to the peer. Each Request has a type field which serves to indicate what is being requested”) [page 5];
- “the authentication session request is used to start an authentication session” (i.e. “Success and Failure...Success packet is sent by the authenticator to the peer to acknowledge successful authentication...Code field set to 3 (Success)...If the authenticator cannot authenticate the peer...Code field set to 4 (Failure)”) [page 5];
- “a transmitter for sending the first portion of transmission control protocol data to the first processor during the connection establishment process” (i.e. “The Request packet is

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sent by the authenticator to the peer. Each Request has a type field which serves to indicate what is being requested”) [page 5];

but, they do not explicitly disclose,

- “TCP,” although Mullen et al. do suggest that PPP is used on TCP, as recited below;

however, Mullen et al. do disclose,

- “PPP is a widely used data link protocol for transmitting Transfer Control Protocol/Internet Protocol (TCP/IP) packets over dial-up telephone connections” [page 1 paragraph 0002];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant’s invention to include, “TCP,” in the invention as disclosed by L. Blunk & J. Vollbrecht since it is reasonable to expect that if PPP is used on TCP, then any newer derivation of PPP such as PPP with EAP would also utilize TCP for the purposes of providing authentication in TCP.

Claim 21:

L. Blunk & J. Vollbrecht and Mullen et al. disclose an apparatus for providing authentication in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication over a network, as in Claim 20 above, but L. Blunk & J. Vollbrecht do not explicitly disclose,

- “the transmission control protocol includes standard TCP”

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however, Mullen et al. do disclose,

- “PPP is a widely used data link protocol for transmitting Transfer Control Protocol/Internet Protocol (TCP/IP) packets over dial-up telephone connections” [page 1 paragraph 0002];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant’s invention to include, “the transmission control protocol includes standard TCP,” in the invention as disclosed by L. Blunk & J. Vollbrecht since EAP is an authentication means for PPP and PPP is widely used with TCP/IP, thus it would be reasonable to expect one of ordinary skill in the art to put these aspects in use together.

Claim 22:

L. Blunk & J. Vollbrecht and Mullen et al. disclose an apparatus for providing authentication in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication over a network, as in Claim 21 above, but L. Blunk & J. Vollbrecht do not explicitly disclose,

- “the first portion of transmission control protocol data includes a request to establish a standard TCP connection”

however, Mullen et al. do disclose,

- “PPP is a widely used data link protocol for transmitting Transfer Control Protocol/Internet Protocol (TCP/IP) packets over dial-up telephone connections” [page 1 paragraph 0002];

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Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "the first portion of transmission control protocol data includes a request to establish a standard TCP connection," in the invention as disclosed by L. Blunk & J. Vollbrecht since EAP is an authentication means for PPP and PPP is widely used with TCP/IP, thus it would be reasonable to expect one of ordinary skill in the art to put these aspects in use together.

Claim 23:

L. Blunk & J. Vollbrecht and Mullen et al. disclose an apparatus for providing authentication in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication over a network, as in Claim 22 above, further comprising,

- "the standard response includes a segment used in a three-way handshake" (i.e. "Additional Request packets MUST be sent until a valid Response packet is received, or an optional retry counter expires. Retransmitted Requests MUST be sent with the same Identifier value in order to distinguish them from new Requests") [page 9].

Claim 24:

L. Blunk & J. Vollbrecht and Mullen et al. disclose an apparatus for providing authentication in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication over a network, as in Claim 21 above, further comprising,

- "the authentication session request includes a value in a TCP segment header" (i.e. "The authenticator MUST transmit an EAP packet with the Code field set to 1 (Request)") [page 5].

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Claim 25:

L. Blunk & J. Vollbrecht and Mullen et al. disclose an apparatus for providing authentication in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication over a network, as in Claim 24 above, further comprising,

- “a first value is set for data from the second processor to the first processor” (i.e. “The Request packet is sent by the authenticator to the peer”) [page 5];
- “a second value is set for data from the first processor to the second processor” (i.e. “The peer MUST send a Response packet in reply to a Request packet”) [page 6].

Claim 26:

L. Blunk & J. Vollbrecht and Mullen et al. disclose an apparatus for providing authentication in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication over a network, as in Claim 21 above, further comprising,

- “the authentication session item includes a TCP option” (i.e. “Type - The Type field is one octet. This field indicates the Type of Request or Response”) [page 6].

Claim 27:

L. Blunk & J. Vollbrecht and Mullen et al. disclose an apparatus for providing authentication in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication over a network, as in Claim 26 above, further comprising,

- “the option includes an octet” (i.e. “The Type field is one octet”) [page 6].

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Claim 28:

L. Blunk & J. Vollbrecht disclose an apparatus for providing authentication in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication over a network, as in Claim 20 above, further comprising,

- “the authentication session includes an Extensible Authentication Protocol (EAP) session” (i.e. “The PPP Extensible Authentication Protocol (EAP) is a general protocol for PPP authentication which supports multiple authentication mechanisms”) [page 3].

Claim 29:

L. Blunk & J. Vollbrecht disclose a computer-readable storage medium including instructions for providing authentication in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication over a network comprising,

- “one or more instructions for creating an authentication session request in a standard response to the request to establish the TCP connection first portion of transmission control protocol data” (i.e. “The Request packet is sent by the authenticator to the peer. Each Request has a type field which serves to indicate what is being requested”) [page 5];
- “the authentication session item is used to start an authentication session” (i.e. “The authenticator MUST transmit an EAP packet with the Code field set to 1 (Request)”) [page 5];
- “one or more instructions for sending the response to the first processor during the connection establishment process” (i.e. “The Request packet is sent by the authenticator to the peer”) [page 5];

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- “wherein the first processor enters an authentication session as a result of receiving the authentication session request” (i.e. “Success and Failure...Success packet is sent by the authenticator to the peer to acknowledge successful authentication...Code field set to 3 (Success)...If the authenticator cannot authenticate the peer...Code field set to 4 (Failure)”) [page 5];

but, they do not explicitly disclose,

- “TCP,” although Mullen et al. do suggest that PPP is used on TCP, as recited below;

however, Mullen et al. do disclose,

- “PPP is a widely used data link protocol for transmitting Transfer Control Protocol/Internet Protocol (TCP/IP) packets over dial-up telephone connections” [page 1 paragraph 0002];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant’s invention to include, “TCP,” in the invention as disclosed by L. Blunk & J. Vollbrecht since it is reasonable to expect that if PPP is used on TCP, then any newer derivation of PPP such as PPP with EAP would also utilize TCP for the purposes of providing authentication in TCP.

Claim 32:

L. Blunk & J. Vollbrecht disclose a method for initiating an authentication session in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication with a second processor over a network, the method executing in the first processor, as in Claim 31 above, but they do not explicitly disclose,

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- “the step of sending a request includes a substep of sending a standard transmission control protocol (TCP) request,” although Mullen et al. do suggest utilizing TCP, as recited below;

however, Mullen et al. do disclose,

- “PPP is a widely used data link protocol for transmitting Transfer Control Protocol/Internet Protocol (TCP/IP) packets over dial-up telephone connections” [page 1 paragraph 0002];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant’s invention to include, “the step of sending a request includes a substep of sending a standard transmission control protocol (TCP) request,” in the invention as disclosed by L. Blunk & J. Vollbrecht since EAP is an authentication means for PPP and PPP is widely used with TCP/IP, thus it would be reasonable to expect one of ordinary skill in the art to put these aspects in use together.

Claim 34:

L. Blunk & J. Vollbrecht and Mullen et al. disclose a method for initiating an authentication session in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication with a second processor over a network, the method executing in the first processor, as in Claim 32 above, but L. Blunk & J. Vollbrecht do not explicitly disclose,

- “a first portion of transmission control protocol data includes a request to establish a standard TCP connection,” although Mullen et al. do suggest utilizing TCP, as recited below;

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however, Mullen et al. do disclose,

- “PPP is a widely used data link protocol for transmitting Transfer Control Protocol/Internet Protocol (TCP/IP) packets over dial-up telephone connections” [page 1 paragraph 0002];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant’s invention to include, “a first portion of transmission control protocol data includes a request to establish a standard TCP connection,” in the invention as disclosed by L. Blunk & J. Vollbrecht since EAP is an authentication means for PPP and PPP is widely used with TCP/IP, thus it would be reasonable to expect one of ordinary skill in the art to put these aspects in use together.

Claim 35:

L. Blunk & J. Vollbrecht and Mullen et al. disclose a method for initiating an authentication session in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication with a second processor over a network, the method executing in the first processor, as in Claim 34 above, further comprising,

- “the first portion of transmission protocol data includes a segment used in a three-way handshake” (i.e. “Additional Request packets MUST be sent until a valid Response packet is received, or an optional retry counter expires. Retransmitted Requests MUST be sent with the same Identifier value in order to distinguish them from new Requests”) [page 9].

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Claim 36:

L. Blunk & J. Vollbrecht and Mullen et al. disclose a method for initiating an authentication session in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication with a second processor over a network, the method executing in the first processor, as in Claim 34 above, further comprising,

- “the authentication session request includes setting a value in a TCP segment header”
(i.e. “The authenticator MUST transmit an EAP packet with the Code field set to 1 (Request)”) [page 5].

Claim 37:

L. Blunk & J. Vollbrecht and Mullen et al. disclose a method for initiating an authentication session in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication with a second processor over a network, the method executing in the first processor, as in Claim 36 above, further comprising,

- “a first value is set for data from the second processor to the first processor” (i.e. “The Request packet is sent by the authenticator to the peer”) [page 5];
- “a second value is set for data from the first processor to the second processor” (i.e. “The peer MUST send a Response packet in reply to a Request packet”) [page 6].

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Claim 38:

L. Blunk & J. Vollbrecht disclose an apparatus for initiating an authentication session in a connection establishment process of a transmission control protocol comprising,

- “sending a request to establish a transmission session” (i.e. “The Request packet is sent by the authenticator to the peer. Each Request has a type field which serves to indicate what is being requested”) [page 5];
- “receiving an authentication session request during the connection establishment process” (i.e. “The peer MUST send a Response packet in reply to a Request packet”) [page 5];
- “conducting authentication session communications during the connection establishment process” (i.e. “The Request packet is sent by the authenticator to the peer”) [page 5];

but they do not explicitly disclose,

- “one or more processors,” although Mullen et al. do suggest a processor, as recite below;
- “a network interface,” although Mullen et al. do suggest a computer connected to the Internet, as recited below;
- “a computer-readable storage medium on which is stored instructions for causing the one or more processors to perform a method,” although Mullen et al. do suggest memory, as recited below;

however, Mullen et al. do disclose,

- “a processor” [page 3 paragraph 0037];
- “the computer (40) is connected to a wide area network (32), such as the Internet” [page 3 paragraph 0037];
- “memory” [page 3 paragraph 0037];

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Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "one or more processors" and "a network interface" and "a computer-readable medium on which is stored instructions for causing the one or more processors to perform a method," in the invention as disclosed by L. Blunk & J. Vollbrecht for the purposes of having an apparatus for the method(s) to operate on.

Claim 39:

L. Blunk & J. Vollbrecht and Mullen et al. disclose an apparatus for initiating an authentication session in a connection establishment process of a transmission control protocol, as in Claim 38 above, but L. Blunk & J. Vollbrecht do not explicitly disclose,

- "standard transmission control protocol (TCP) requests are issued," although Mullen et al. do suggest utilizing TCP, as recited below;

however, Mullen et al. do disclose,

- "PPP is a widely used data link protocol for transmitting Transfer Control Protocol/Internet Protocol (TCP/IP) packets over dial-up telephone connections" [page 1 paragraph 0002];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "standard transmission control protocol (TCP) requests are issued," in the invention as disclosed by L. Blunk & J. Vollbrecht since EAP is an authentication means for PPP and PPP is widely used with TCP/IP, thus it would be reasonable to expect one of ordinary skill in the art to put these aspects in use together.

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Claim 40:

L. Blunk & J. Vollbrecht and Mullen et al. disclose an apparatus for initiating an authentication session in a connection establishment process of a transmission control protocol, as in Claim 39 above, further comprising,

- “a first portion of a standard transmission control protocol request includes a segment used in a three-way handshake” (i.e. “Additional Request packets MUST be sent until a valid Response packet is received, or an optional retry counter expires. Retransmitted Requests MUST be sent with the same Identifier value in order to distinguish them from new Requests”) [page 9].

Claim 41:

L. Blunk & J. Vollbrecht and Mullen et al. disclose an apparatus for initiating an authentication session in a connection establishment process of a transmission control protocol, as in Claim 39 above, further comprising,

- “an authentication session request includes setting a value in a TCP segment header” (i.e. “The authenticator MUST transmit an EAP packet with the Code field set to 1 (Request)”) [page 5].

Claim 42:

L. Blunk & J. Vollbrecht and Mullen et al. disclose an apparatus for initiating an authentication session in a connection establishment process of a transmission control protocol, as in Claim 39 above, further comprising,

- “a first value is set for a first type of communication session” (i.e. “The Request packet is sent by the authenticator to the peer”) [page 5];

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- “a second value is set for a second type of communication session” (i.e. “The peer MUST send a Response packet in reply to a Request packet”) [page 6].

Claim 46:

L. Blunk & J. Vollbrecht disclose a method for initiating an authentication session in a connection establishment process of a transmission control protocol between first and second processors communicating via a network, as in Claim 45 above, but they do not explicitly disclose,

- “sending a standard transmission control protocol (TCP) request,” although Mullen et al. do suggest utilizing TCP, as recited below;

however, Mullen et al. do disclose,

- “PPP is a widely used data link protocol for transmitting Transfer Control Protocol/Internet Protocol (TCP/IP) packets over dial-up telephone connections” [page 1 paragraph 0002];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant’s invention to include, “sending a standard transmission control protocol (TCP) request,” in the invention as disclosed by L. Blunk & J. Vollbrecht since EAP is an authentication means for PPP and PPP is widely used with TCP/IP, thus it would be reasonable to expect one of ordinary skill in the art to put these aspects in use together.

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Claim 47:

L. Blunk & J. Vollbrecht and Mullen et al. disclose a method for initiating an authentication session in a connection establishment process of a transmission control protocol between first and second processors communicating via a network, as in Claim 46 above, but L. Blunk & J. Vollbrecht do not explicitly disclose,

- “the first portion of transmission control protocol data includes a request to establish a standard TCP connection,” although Mullen et al. do suggest utilizing TCP, as recited below;

however, Mullen et al. do disclose,

- “PPP is a widely used data link protocol for transmitting Transfer Control Protocol/Internet Protocol (TCP/IP) packets over dial-up telephone connections” [page 1 paragraph 0002];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant’s invention to include, “the first portion of transmission control protocol data includes a request to establish a standard TCP connection,” in the invention as disclosed by L. Blunk & J. Vollbrecht since EAP is an authentication means for PPP and PPP is widely used with TCP/IP, thus it would be reasonable to expect one of ordinary skill in the art to put these aspects in use together.

Claim 48:

L. Blunk & J. Vollbrecht and Mullen et al. disclose a method for initiating an authentication session in a connection establishment process of a transmission control protocol between first and second processors communicating via a network, as in Claim 47 above, further comprising,

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- “the first portion of transmission protocol data includes a segment used in a three-way handshake” (i.e. “Additional Request packets MUST be sent until a valid Response packet is received, or an optional retry counter expires. Retransmitted Requests MUST be sent with the same Identifier value in order to distinguish them from new Requests”) [page 9].

Claim 49:

L. Blunk & J. Vollbrecht and Mullen et al. disclose a method for initiating an authentication session in a connection establishment process of a transmission control protocol between first and second processors communicating via a network, as in Claim 47 above, further comprising,

- “the authentication session request includes setting a value in a TCP segment header” (i.e. “The authenticator MUST transmit an EAP packet with the Code field set to 1 (Request)”) [page 5].

Claim 51:

L. Blunk & J. Vollbrecht disclose an apparatus for initiating an authentication session in a connection establishment process of a transmission control protocol comprising,

- “a client processor” (i.e. “peer - The other end of the point-to-point link; the end which is being authenticated by the authenticator”) [page 3];
- “a server processor” (i.e. “authenticator - The end of the link requiring the authentication. The authenticator specifies the authentication protocol to be used in the Configure-Request during Link Establishment phase”) [page 2];

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- “requesting, with the client processor, to establish a transmission session” (i.e. “The Request packet is sent by the authenticator to the peer. Each Request has a type field which serves to indicate what is being requested”) [page 5];
- “creating, with the server processor, an authentication session item in a first portion of transmission control protocol data” (i.e. “The Request packet is sent by the authenticator to the peer. Each Request has a type field which serves to indicate what is being requested”) [page 5];
- “the authentication session item is used to start an authentication session” (i.e. “The authenticator MUST transmit an EAP packet with the Code field set to 1 (Request)”) [page 5];
- “sending the first portion of transmission control protocol data from the server processor to the client processor during the connection establishment process” (i.e. “The Request packet is sent by the authenticator to the peer. Each Request has a type field which serves to indicate what is being requested”) [page 5];
- “receiving the first portion of transmission control protocol data at the client processor” (i.e. “Responses MUST only be sent in reply to a received Request and never retransmitted on a timer. The Identifier field of the Response MUST match that of the Request”) [page 5];
- “conducting authentication session communications” (i.e. “The Request packet is sent by the authenticator to the peer”) [page 5];

but, they do not explicitly disclose,

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- “a computer-readable storage medium on which is stored instructions for causing the one or more processors to perform a method,” although Mullen et al. do suggest memory, as recited below;

however, Mullen et al. do disclose,

- “memory” [page 3 paragraph 0037];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant’s invention to include, “a computer-readable medium on which is stored instructions for causing the one or more processors to perform a method,” in the invention as disclosed by L. Blunk & J. Vollbrecht for the purposes of storing information which may be executed.

Claim 52:

L. Blunk & J. Vollbrecht disclose an apparatus for initiating an authentication session in a connection establishment process of a transmission control protocol, as in Claim 51 above, but they do not explicitly disclose,

- “standard transmission control protocol (TCP) requests are issued,” although Mullen et al. do suggest utilizing TCP, as recited below;

however, Mullen et al. do disclose,

- “PPP is a widely used data link protocol for transmitting Transfer Control Protocol/Internet Protocol (TCP/IP) packets over dial-up telephone connections” [page 1 paragraph 0002] [page 1 paragraph 0002];

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Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "standard transmission control protocol (TCP) requests are issued," in the invention as disclosed by L. Blunk & J. Vollbrecht since EAP is an authentication means for PPP and PPP is widely used with TCP/IP, thus it would be reasonable to expect one of ordinary skill in the art to put these aspects in use together.

Claim 53:

L. Blunk & J. Vollbrecht disclose an apparatus for initiating an authentication session in a connection establishment process of a transmission control protocol, as in Claim 51 above, further comprising,

- "the first portion of a standard transmission control protocol request includes a segment used in a three-way handshake" (i.e. "Additional Request packets MUST be sent until a valid Response packet is received, or an optional retry counter expires. Retransmitted Requests MUST be sent with the same Identifier value in order to distinguish them from new Requests") [page 9].

Claim 54:

L. Blunk & J. Vollbrecht disclose an apparatus for initiating an authentication session in a connection establishment process of a transmission control protocol, as in Claim 51 above, further comprising,

- "an authentication session request includes setting a value in a TCP segment header" (i.e. "The authenticator MUST transmit an EAP packet with the Code field set to 1 (Request)") [page 5].

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Claim 55:

L. Blunk & J. Vollbrecht disclose an apparatus for initiating an authentication session in a connection establishment process of a transmission control protocol, as in Claim 51 above, further comprising,

- “a first value is set for a first type of communication session” (i.e. “The Request packet is sent by the authenticator to the peer”) [page 5].
- “a second value is set for a second type of communication session” (i.e. “The peer MUST send a Response packet in reply to a Request packet”) [page 6].

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over L. Blunk & J. Vollbrecht (RFC 2284) in view of Mullen et al. (US-20020147909-A1) and in view of W. Simpson (RFC 1994).

Claim 10:

L. Blunk & J. Vollbrecht and Mullen et al. disclose a method for providing authentication in a connection establishment process of a transmission control protocol, wherein a first processor attempts to establish a communication over a network, the method executing in a second processor, as in Claim 1 above, but their combination do not explicitly disclose,

- “receiving a response from the first processor in response to sending the first portion of transmission control protocol data,” although W. Simpson does suggest peer response, as recited below;
- “determining whether the response from the first processor indicates that the first processor will comply with the authentication session,” although W. Simpson does suggest authentication via hash check, as recited below;

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- “if the first processor will not comply with the authentication session then performing a substep of restricting access of the first processor,” although W. Simpson does suggest terminating the connection, as recited below;

however, W. Simpson does disclose,

- “The peer responds with a value calculated using a "one-way hash" function” [page 3];
- “The authenticator checks the response against its own calculation of the expected hash value. If the values match, the authentication is acknowledged” [page 3];
- “otherwise the connection SHOULD be terminated” [page 3];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant’s invention to include, “receiving a response from the first processor in response to sending the first portion of transmission control protocol data” and “determining whether the response from the first processor indicates that the first processor will comply with the authentication session” and “if the first processor will not comply with the authentication session then performing a substep of restricting access of the first processor,” in the invention as disclosed by L. Blunk & J. Vollbrecht for the purposes of having a challenge hand-shake authentication to verify a peer.

Response to Arguments

7. Applicant's arguments filed 10/20/2008 have been fully considered but they are not persuasive.

- The applicant's arguments appear to be with respect to "RFC 1661" and do not address the cited prior art of record which was directly applied to the applicant's limitations under 35 U.S.C. 102(b) and 35 U.S.C. 103(a), and therefore is non-persuasive. The examiner notes that the RFC 1661 document is older than the RFC 2284 document used and does not include EAP. Thus, conceptually, the differences between these two RFC's is the 2284 document includes authentication built on aspects found in the previous 1661, but not without some changes to the original specification of 1661.
- The applicant's remarks with respect to teaching away from is non-persuasive:

Disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. In re Susi, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). "A known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use." In re Gurley, 27 F.3d 551, 554, 31 USPQ2d 1130, 1132 (Fed. Cir. 1994) (The invention was directed to an epoxy impregnated fiber-reinforced printed circuit material. The applied prior art reference taught a printed circuit material similar to that of the claims but impregnated with polyester-imide resin instead of epoxy. The reference, however, disclosed that epoxy was known for this use, but that epoxy impregnated circuit boards have "relatively acceptable dimensional stability" and "some degree of flexibility," but are inferior to circuit boards impregnated with polyester-imide resins. The court upheld the rejection concluding that applicant's argument that the reference teaches away from using epoxy was insufficient to overcome the rejection since "Gurley asserted no discovery beyond what was known in the art." 27 F.3d at 554, 31 USPQ2d at 1132.). Furthermore, "[t]he prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed...." In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Oscar Louie whose telephone number is 571-270-1684. The examiner can normally be reached Monday through Thursday from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser Moazzami, can be reached at 571-272-4195. The fax phone number for Formal or Official faxes to Technology Center 2100 is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/OAL/
12/31/2008

/Nasser G Moazzami/
Supervisory Patent Examiner, Art Unit 2436